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Instructions for use

# FAUNA OF THE THYSANOPTERA IN JAPAN

By

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(Part VI)

(With 2 Text-figures)

Suborder *TUBULIFERA*

Family *PHLOETHRIPIDAE*

Subfamily *PHLOETHRIPINAE*

Tribe **Phloeothripini**

## 19. *Ecacanthothrips piceae* sp. nov.

Male holotype. Colour: Head and prothorax brown, pterothorax and abdomen dark brown, except the tube which is blackish brown being lighter towards the tip. Antennal segments 1 to 2 concolorous with the head, pale brown in segments 3 to 5, at the basal half lighter, segments 6 to 8 dark brown except at the basal third of the 6 which is paler. Eyes black in a transmitted light, but in a direct light dark red. Ocelli dark, with a crescent yellow patch. Fore coxa and femur brown, towards the inner margin being paler, fore tibia brown at the distal portion, with a shade of yellow, fore tarsi yellowish. Middle and hind femora and tibiae blackish brown uniformly, tarsus pale brown. Fore and hind wings pale brown, the former with a pale brownish portion at the base, vein wanted.

All prominent spines of the body pale brown or brown, rings dark brown. Total body length 2.236 mm.; head length .301 mm., width .241 mm.; prothorax length .189 mm., width .412 mm. (including coxa); mesothorax length .163 mm., width .456 mm.; metathorax length .172 mm., width .482 mm.; length of the abdominal segments 1.376 mm., width .447 mm. (seg. 2); seg. 3. .412 mm.; seg. 8 distal .198 mm., base .241 mm.; seg. 9 distal .103 mm., base .129 mm. Tube length .129 mm., width at the base .065 mm., at the tip .040 mm.; fore femur .275 mm., width .112 mm., (at the widest portion); fore tibia and tarsus .292 mm., the middle femur .215 mm., the tibia .215 mm., the tarsus .086 mm.; hind femora .275 mm., the tibia .292 mm., the tarsus .096 mm. Fore wing 1.185 mm., hind wing .956 mm.

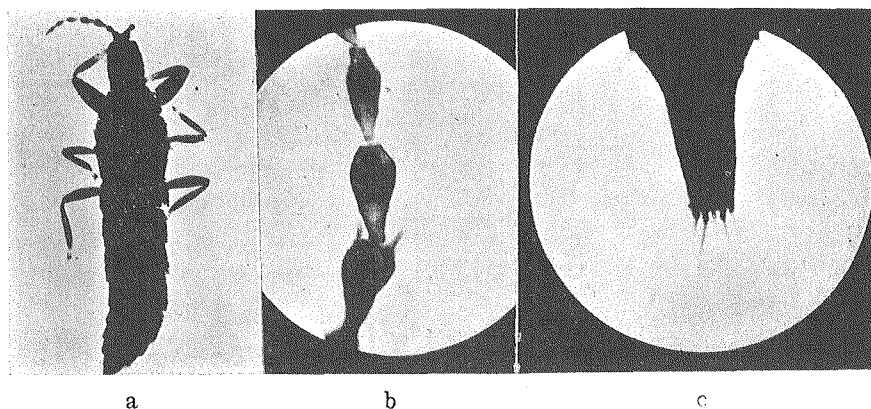


Fig. 1

- a. *Ecacanthothrips ficeae* sp. nov. ♂  
 b. do. Left antennal segments 3-5.  
 c. do. Tube.

Segment of antenna: length (width) I, 42 (B. 45, tip 36); II, 63 (39); III, 88 with 10 sensoria 32, 35 (52); IV, 92 with 4 sense cones 38 (44); V, 87 with 2 sense cones 38 (34); VI, 71 with 2 sense cones 34 (27); VII, 55 (20); VIII, 42 (16); total length about 520  $\mu$ . Length of eye .103 mm., width .06 mm. Length of the spines: on antenal segment 1. 16  $\mu$ ; on seg. 2. 34  $\mu$  (curved); on seg. 3, middle 44  $\mu$ , distal 56  $\mu$ ; on seg. 4, middle 45  $\mu$ , distal 48  $\mu$ ; on seg. 5, near the base 45  $\mu$ , near distal 51  $\mu$ ; on seg. 6, near the base 35  $\mu$ , near distal 53  $\mu$ ; on seg. 7, near the base 43  $\mu$ , near distal 42  $\mu$ ; on seg. 8, near the base 34  $\mu$ , at the tip 40  $\mu$ , postoculars 124  $\mu$ ; on the cheek at near the eyes 16  $\mu$ , at the middle 18  $\mu$ , at near the base 18  $\mu$ ; on the prothorax at anterior angles 85  $\mu$ , on mid-anterior 45  $\mu$ , at posterior angles 91  $\mu$ , on mid-posterior 103  $\mu$ ; on the base of the fore wing, 1st 67  $\mu$ , 2nd 59  $\mu$ ; 3rd 85  $\mu$ , on the abdominal segments on 5. 103  $\mu$  paired; on seg. 7. 69  $\mu$ , 112  $\mu$ ; on seg. 8. 66  $\mu$ , 106  $\mu$ , 112  $\mu$ ; on seg. 9. 120  $\mu$ ; on the tip of the tube 206  $\mu$ , on the coxa upwards 65  $\mu$  stumped, the middle 39  $\mu$  (sharp and strong) downwards 38  $\mu$ , normal.

Head 1.25 times as long as wide, cheeks almost straight, slightly constricted towards the eyes and with 3 short spines along the side, vertex prolonged to the front, conspicuous sharp angles reaching over the insertions of the antennae. Eyes small, .35 times as long as the head, very finely faceted, with black pigment towards the base; ocelli of moderate size, anterior ocellus located at the vertex, posterior ones situated in the frontal middle of the eyes.

Antenna comparatively short, 1.76 times as long as the head, seg. 1 short, sub-conical; seg. 2 barrel-shaped with 8 curved strong spines at the distal portion; seg. 3 shorter than 4, long pyriform, with 10 sensoria in one row at the tip (more or less zigzag) and 8 prominent long spines set on around the sensoria; seg. 4 the longest; from 4 to 7 spindle-shaped and gradually reduced in length or width; 8 the shortest, obovate.

Prothorax trapezoidal .62 times as long as the head, slightly broader than the head, with long dilated spines at the anterior angles. Fore coxae large, overlapping the posterior angles of the prothorax, with 3 spines at the sides. Fore femora moderately broadened, .71 times as long as the head, both sides unarmed; fore tibia normal, without spines; fore tarsi armed with a large tooth. Middle legs the shortest; hind femora as long as the fore femora, but slenderer, with many fine hairs at the outer margin. Mesothorax well developed, mesoscutum divided into two parts, with a sack-like stigma; metathorax large and the widest, metascutum and metasternum very finely wrinkled. Abdominal segment 1 the smallest; seg. 2 slightly broader than the metathorax, with two spines at the posterior angles, the inner one the longest, the outer the shortest, from seg. 7 gradually decreased their width, especially, seg. 9 abruptly tapering backwards. The tube very short, .43 times as long as the head.

This species very closely resembles *E. inarmatus* KUROSAWA (1932, MIKIO KUROSAWA, Konchû vol. 5, No. 5, pp. 238-242, Fig. 3) collected by Mr. KUROSAWA (host unknown), but distinguished from the latter by the colouration of the body, the number of sense cones of the antennal segment 4 and wanting veins of the fore wings.

The type material: Holotype 1 ♂ (ISHIDA No. 2035), collected by Dr. H. KÔNO under the bark of *Picea jezoensis* CARR. at Jozankei near Sapporo, on June 3, 1935. The holotype in the Entomological Museum, Hokkaido Imp. Univ. Sapporo, Japan.

Type locality: Jozankei, Hokkaido, Japan.

Subfamily *MEGATHRIPINAE*

Tribe **Compsothripini**

**20. *Elaphrothrips* sp. Larvae.**

II Stadium. Colour: deep carmine-red, antennal segment I, head with mouth cone, all legs and posterior part of tube uniformly yellowish brown, antennal segments 2 to 7 dark brown, paler at the tips of seg. 2 to 6. Prothorax carmine-red, with the hypodermal pigment, except 2 islands which are concolorous to the head, sometimes spotted by red pigment at the posterior

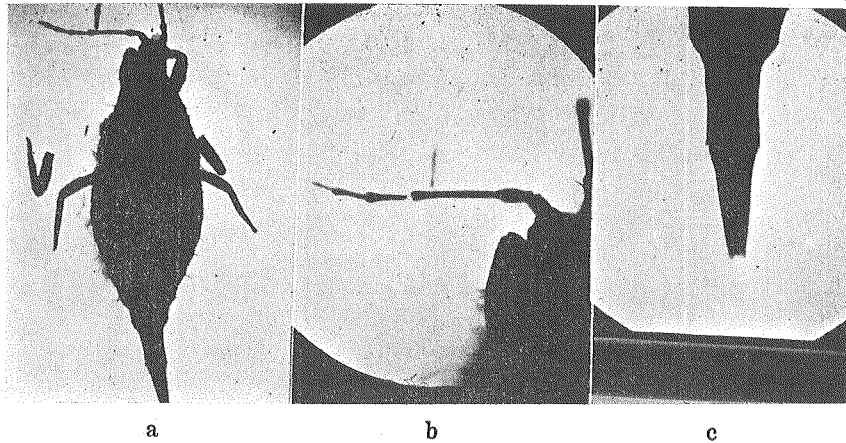


Fig. 2

- a. *Elaphrothrips* sp. II Stadium.
- b. do. Head and antennae.
- c. do. Tube.

angles; mesothorax and metathorax deep carmine-red, except abdominal segments and distal portion of the tube which are blackish brown. Spines of all legs pale or brownish yellow; all prominent spines clear yellow, at the tip of the tube dark brown. Eyes black.

Total body length 2.752 mm.; head length .275 mm., width .215 mm. (across the eyes); prothorax length .327 mm., width at anterior margin .344 mm., at posterior margin .550 mm.; mesothorax length .172 mm., width .731 mm.; metathorax length .189 mm., width .757 mm.; abdominal segment 3 the widest .851 mm.; tube length .344 mm., width at the tip .069 mm., at the base .163 mm. Segment of antenna: length (width) I, 52 (55); II, 103 (52); III, 301 (47); IV, 163 (43); V, 112 (34); VI, 146 (26)  $\mu$ ; total length 869  $\mu$ . Length of spines: antero-cellars 96  $\mu$ , interocellars 69  $\mu$ , postoculars 53  $\mu$ , on lateral margin of the prothorax 137  $\mu$ , on the posterior angles 129  $\mu$ ; on the posterior margin of the mesothorax 172  $\mu$ ; on the posterior angles of the metathorax 215  $\mu$ ; on the posterior margin of the 9th abdominal segment 430-439  $\mu$ ; at the tip of the tube 550  $\mu$ ; on the distal portion of tibia of the middle leg 129  $\mu$ .

Head with sides of the head including eyes about 1.28 times as long as wide, cheeks almost straight, subparallel, interocellar spines moderately developed, postoculars curved and short.

Eyes very small, nearly semi-circle. Ocelli wanted. Mouth cone broad and long, rounded at the tip, reaching to the base of the prosternum, with 2

jointed maxillary palpi, the basal joint extremely short, 2nd joint the longest. Prothorax clearly broader than the head (1.19 times as wide as the head), with a prominent dorsal thickening, in which two islands are visible, with a mid-lateral spine well developed and on the posterior angles long and sharp. Mesothorax slightly broader than the prothorax at the anterior margin and broadened behind, with prominent spines and warts. Metathorax large and a little wider than the mesothorax, with prominent spines, having warts as on the mesothorax, slightly constricted at the posterior margin.

Abdomen 9 segmented, except the tube, a little broader than the metathorax, seg. 3 the broadest, seg. 4 to 7 gradually reduced their width, seg. 8 abruptly decreased, seg. 9 especially long and the narrowest being cup-like cylinder, seg. 1 and 2 without spines at the posterior angles, while another segments having curved spines at the posterior margins, on seg. 9 extremely long, straight, especially 2 spines at the tip of the tube the longest, each segment (except 8 or 9, on account of the opacity of the specimens, I could not well ascertain) with 6 warts in the same distance and each wart with 1 spine, longitudinally 6 rows arranging.

I Stadium. Colour: carmine-red, antennal segment 1, head, all legs, abdominal segment 9 and the tube brownish yellow, antennal segments 2 to 5 pale brown and each segment with a colourless, transparent distal portion, except the seg. 6 which is dark brown. Prothorax, dorsal thickening and all margins coloured by the hypodermal pigment (dot-like) except 2 islands (concolorous to the head, being same as in II Stadium); meso- and metathorax and abdomen uniformly dull carmine-red except some irregular dots at the thorax, and 2 or 3 irregular streaks along the anterior margins of the abdominal segments, which are paler. All prominent spines grayish yellow.

Total body length about 1.2 mm., except the tube (wanted exact measurement of the length, on account of a bending at the abdominal segment 6. of the unique specimen), head length .198 mm., width .181 mm.; prothorax length .241 mm., width .215 mm. at the anterior margin, .327 mm. at the posterior margin; mesothorax length .096 mm., width .387 mm.; metathorax length .086 mm., width .421 mm.; abdominal segment 3 the broadest .43 mm.; tube length .172 mm., width .096 mm. at the anterior margin, .043 mm. at the posterior margin.

Segment of antenna: length (width) I, 43 (52); II, 77 (43); III, 146 (43); IV, 112 (39); V, 82 (39); VI, 146 (29); total length 611  $\mu$ .

Length of femora in the fore legs .215 mm., width .086 mm.; in the middle legs .206 mm., width .069 mm.; in the hind legs .215 mm., width .069 mm. Length of spines on the posterior angles of the mesothorax 129  $\mu$ ; on the posterior angles of the metathorax 129  $\mu$ ; on the abdominal segment 9. 387  $\mu$ .

The outline of the body similar with the previous Stadium, but the total length of the antenna comparatively long and thick, segment 3 short, which is same length with the terminal segment.

The colouration of this insect generally paler than in the previous Stadium, especially the abdominal segment 9 brownish yellow, while in the II Stadium blackish brown, and each femur uniformly pale brown.

Head 1.09 times as long as width, cheeks somewhat straight, subparallel, total length of the antenna about half as long as the body (together with the tube); prothorax slightly wider than the head and broadened hind, wardly with some small spines on the posterior margin; metathorax slightly wider than the mesothorax, with downwardly curved spines on the posterior margin. Abdominal segment 1 slightly narrower than the metathorax, seg. 2 and 3 nearly in the almost with same width, both broader than the others, seg. 4 to 6 gradually reduced the width, seg. 7 abruptly narrowed and connected to the next segment with very prominent long spines, seg. 9 long, cylindrical, the tube elongated, funnel shaped, with long spines at the tip.

Type material: collected by Mr. T. KURATA (ISHIDA No. 555) under the bark of *Acacia confusa* MERILL. at Shinka near Tainan, Formosa, on May, 1925, II Stadium 8 individuals and I Stadium only one, imbedded together in the same preparete. The type in the Entomological Museum, Hokkaido Imp. Univ. Sapporo, Japan.

The type locality: Shinka, Formosa, Japan.